Before the
Federal Communications Commission
Washington, DC 20554

In the Matters of	)	
	)	
IP-Enabled Services	)	WC Docket No. 04-36
E9-1-1 Requirements for IP-Enabled Service	)	
Providers	)	WC Docket No. 05-196
	)	

Comments of the Rehabilitation Engineering Research Center on Telecommunications Access

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SUMMARY

The RERC-TA believes that the Commission does need to take steps to ensure that people with disabilities who desire to use interconnected VoIP service can obtain access to E911 services, both directly and through telecommunications relay services. Past failures of the competitive marketplace to provide accessibility indicate that the only way to ensure that people with disabilities will obtain this access will be through regulatory mandates.

People who are deaf and hard of hearing are moving away from PSTN telecommunications because of the many advantages of broadband both for text and for video telecommunications. The forward-looking policies of the FCC have encouraged this migration by authorizing Internet text relay services and video relay services. These services have revolutionized relay services and are growing rapidly. The current proceeding addresses access to 9-1-1 by voice customers who have moved to Voice over IP and dropped their landline service, yet can expect that VoIP will be able to reach 9-1-1. Likewise, many deaf and hard of hearing consumers have lost access to 9-1-1 as they have migrated to broadband and wireless data services. The gap widens everyday. The Commission needs to again be forward-looking and address this discrepancy immediately. Waiting only increases the installed base and the cost and difficulty of addressing the problem, especially since systems are currently under review for E9-1-1-on VoIP in general. Solutions for text communication should not be confined to TTY compatibility, since TTY over the Internet is not a desirable long-term solution to the problem for industry or consumers. In the end a reliable, interoperable, IPtext solution is needed.

Full accessibility will require, in part, access to 9-1-1 from Internet relay providers as well as a numbering system, or other reliable method, for IP-based relay users that facilitates return calls from PSAPs.

The Commission has more than ample authority to do so under obligations to ensure functionally equivalent relay services under Section 255, its universal service obligation under Section 1, and its accessibility mandates under Section 255 to require disability access to emergency services via IP-based technologies.

IP-borne communications services use software-based approaches that can readily be tailored to resolve many, if not all potential access barriers. But to be effective and non-burdensome, access solutions need to be incorporated when these services are first being designed and developed. Competitive market forces have proven to be insufficient to achieve these access solutions.

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I. Introduction

The Rehabilitation Engineering Research Center on Telecommunications Access (RERC-TA) submits these comments in response to the Federal Communications Commission's (FCC or Commission) Notice of Proposed Rulemaking (NPRM) on the handling of E911 calls by interconnected voice over Internet Protocol (VoIP) providers.[1] The RERC-TA is a joint project of Gallaudet University and the Trace Center of the University of Wisconsin, Madison whose primary mission is to find ways to make standard systems directly usable by people with all types and degrees of disability, and to work with industry and government to put access strategies into place. The RERC-TA has previously submitted comments in response to numerous FCC proceedings on related issues, including proceedings on the application of Section 255 to IP telephony, Section 706 inquiries, and various broadband and Internet Protocol (IP)-enabled proceedings.

[1] *In the Matters of IP-Enabled Services, E9-1-1 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, WC Dockets No. 04-36, 05-196, FCC 05-116 (June 3, 2005) (*"VoIP E9-1-1 Order*").

The opinions expressed herein are those of the RERC faculty and not those of our sponsoring organizations.

The Commission asks, in the further notice of proposed rulemaking, whether interconnected VoIP services are accessible to TTYs. VoIP's ability to handle TTY depends on network conditions (with heavy traffic more likely to result in garbling), the codec used (with high bitrate codecs handling TTY relatively well), and whether TTY coupling methods are supported by the VoIP system either directly or though an analog terminal adapter. (Not all analog terminal adapters will pass TTY and many VoIP phones cannot connect directly to TTY.)

In general, VoIP is unreliable with regard to TTY transmission in real-world conditions, especially in emergency conditions. Although TTY use is declining, it is still depended on by segments of society and it is the only analog text technology supported at the PSAP.

Encouraged by forward-looking FCC policies, consumers who have traditionally relied on TTY are embracing IP enabled technologies, including IP enabled text and video relay services. Further, the ability to use IP text and video relay services as well as wireless relay services has encouraged a growing number of deaf and hard of hearing consumers to drop landline service and abandon the analog TTY. Like voice customers who became cut off from 9-1-1 service when they chose a VoIP interconnect service, people who rely on text methods of communication are increasingly unable to make direct text calls into 9-1-1 unless they maintain an analog phone subscription whose only real use is for calling 9-1-1.

The Commission needs to address this issue in coordination with the U.S. Department of Justice, which oversees ADA Title II requirements on the PSAPs. In addition, a release of waivers for IP enabled relay services to handle 9-1-1 calls should be tied to this proceeding, since the proceeding will provide technological solutions for authentication and pass through of location information.

Just as voice telephone users reasonably expect VoIP services to function in the same way that traditional telephone services operate, so too should people with disabilities be able to expect that they will have the same access to emergency services as their telephone communication migrates to IP.[2] Specifically, to the extent that people with disabilities use interconnected VoIP services – either directly or through relay services – these individuals should receive the assurances that their calls to 9-1-1 public safety answering points (PSAPs) will get there. Further, they should be answered in a timely and effective manner, and information about their telephone number and location needs to be automatically conveyed to PSAP dispatchers.

II. Internet-Based Telecommunications Relay Services Should Be Capable of Handling Emergency Calls

Internet-enabled technologies have already revolutionized TRS communications. Previously reliant on TTY transmissions that were carried over the PSTN, new relay technologies now enable people who are deaf, hard of hearing and speech disabled to communicate via the Internet using computers, PDAs, and various wireless devices.[3]

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[2] As the Commission has explained, "a service that enables a customer to do everything (or nearly everything) the customer could do using an analog telephone, and more, can at least reasonably be expected and required to route 9-1-1 calls to the appropriate destination." VoIP E9-1-1 Order at ¶23.

[3] The FCC approved video relay services in March of 2000. *In the Matter of Telecommunications Services and Speech-to-Speech Services for Individuals with Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, CC Dkt 90-571, FCC 00-56 (2000). The FCC approved Internet-based relay services in April 2002. *In the Matter of Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling and

Enormous growth in the volume of IP-based text and video calls, accompanied by the declining incidence of traditional TTY relay calls over the past two years, predict the eventual demise of the TTY and consumer reliance on the PSTN where and as IP alternatives to the analog PSTN become available. Relay services that make use of high speed Internet services offer significant benefits, including portability, speed, and, in the case of video relay service (VRS), the ability to communicate in American Sign Language (ASL), the first language of many deaf Americans. As such, these technologies come much closer to providing the functionally equivalent telephone service mandated by the Americans with Disabilities Act (ADA) than does TTY-based TRS.

However, present FCC rules waive the requirement for all Internet-based relay services to handle 9-1-1 calls, until January 2006 for video relay calls, and until January 2008 for text-based relay calls. As relay users migrate along with their hearing peers from "POTS" to far more versatile Internet-based technologies, mandates for relay services to handle emergency calls need to be carried forward. This will be necessary to ensure the provision of telephone services for people who are deaf, hard of hearing, or speech disabled that is functionally equivalent to conventional voice telephone services. With the steadily increasing older population, this need will be growing.

The RERC-TA maintains that the most effective means of achieving emergency access for relay users is not to address this issue separately from other VoIP emergency handling issues (i.e. as a later and expensive retrofit). Rather, the architecture that will be used to achieve VoIP connection to emergency services can be applied to IP-based relay services, if relay services are given similar requirements.

Second Further Notice of Proposed Rulemaking, CC Dkt No. 98-67, FCC 02-121 (April 2002) (IP Relay Ruling).

As part of a ruling, the Commission will need to look at such issues as call-back capability (i.e. How will 9-1-1 be able to call back to an IP customer using an IP relay service?") Unlike interconnected VoIP services, there is no assigned NANP phone number or other common identifier that can be dialed from any relay service to any IP relay user. Dynamic IP addresses used by many ISPs render IP addresses unusable as a standard for this purpose. An open directory is needed, preferably one that, like VoIP interconnect services, conforms to the North American Numbering Plan; and since this serves the purpose of functional equivalency, the maintenance of such a national directory should be a reimbursable service.

The FCC has once before ruled on the need for easy dialing access by relay users, when it required nationwide 7-1-1 TRS dialing.4 Use of this access number has facilitated incoming calls from hearing persons to deaf individuals, greatly enhancing the benefits of TRS. Similarly, it is critical for IP relay providers to enable their customers to easily receive calls both from PSAPs and from hearing people in times of urgency. This will be especially important in the event of a national crisis; then all Americans will need the confidence of knowing that they will be able to contact necessary authorities and receive critical information regardless of the relay equipment that they use.

III. People who are Deaf and Hard of Hearing Must Be Able to *Directly* Contact 9-1-1 Services

The FCC has asked for comment on the ability of people with disabilities to use VoIP services to directly call a PSAP via a TTY. As the FCC accurately notes, Title II of

[4] *In the Matter of The Use of N11 Codes and Other Abbreviated Dialing Arrangements*, Second Report and Order, CC Dkt No. 92-105, FCC 00-257 (August 9, 2000). Prior to this mandate, there were more than 100 relay access numbers throughout the country, making it exceedingly difficult for travelers and hearing people to contact deaf people through relay services.

the ADA requires direct 9-1-1 access by individuals using TTYs. VoIP services that allow connection of analog telephony devices, for example, through a terminal adapter, are unreliable for transporting TTY. Problems include relatively low-bitrate voice codecs (that cause garbling), and packet loss. Even low amounts of packet loss, under 2%, disproportionately garble TTY in comparison to voice. VoIP products that do not allow direct connection of an analog telephony device are even more inaccessible by TTY since they would permit only acoustic coupling. We note that disruption of TTY transmission can occur at various points of transmission in such an IP system, and is nearly impossible for the consumer to diagnose.

While the RERC-TA does believe that a mechanism for ensuring TTY reliability and compatibility with VoIP services will be needed until such time that two way IP text capability is achieved, the Commission needs to look beyond this solution alone, since analog technologies need to be retired as soon as is feasible and functionality needs to be improved over the limitations of the TTY.

Far preferable for emergency (as well as non-emergency) situations, would be a single, reliable IP text standard that would enable any two parties who have screens and keyboards on their IP phones or other end-user equipment to use both text and voice (separately or together) as needed during conversations. If text functionality is integrated with voice functionality ("text everywhere there is voice"), it would permit always-available *direct, real-time* telecommunications among deaf and hearing people without the need for TTYs, and with diminishing reliance on relay services. The introduction of this type of service would allow deaf, hard of hearing, and speech-disabled people who use text for conversation to migrate away from TTY technology and use most any phone

with a display that they encounter. The ability to simultaneously transmit voice and text over IP networks would also facilitate voice carry-over (VCO) and hearing carry-over (HCO) services, enabling deaf, hard of hearing, and speech disabled individuals to communicate using text in one direction and voice in the other.[5]

The problem is that currently, there is no market incentive to develop and sell a standardized text product. Multiple formats exist for text transmission over the Internet and for other kinds of text messaging, which are not compatible with each other. The lack of standards hampers the ability of PSAPs to handle the messaging forms of text communication. Internet text relay services do not, to the best of our knowledge, use any of the industry standards for IP text calling (e.g., RFC 2793 or RFC 4103,) nor do most VoIP interconnect services.

Industry standards have been written to address Voice over IP-TTY backward compatibility. Few companies have implemented any of them, or if implemented, they are often buried as a feature and not as default – leaving the burden of making the product accessible to the purchaser of the product. Very few users would ever understand how to make such settings work and when the product is a network product (that end-users cannot configure or would not even know about) then it rarely if ever will get implemented if not required and set as the default. Multiple standards (or multiple, incompatible options within a standard) for transmission of text also create a problem. Because industry segments or companies can choose their method without regard to interoperability, in practice, the end result will often be failure to support text telephony at all (with different parts of the system supporting different, incompatible text transport

[5] VCO allows an individual with speech, but with hearing loss, to speak by phone directly to another party, and to receive text back. HCO allows an individual with hearing, but with limited speech, to hear by phone directly from another person, and to send text back.

methods). Further, it is common for firewall and gateway barriers to block text (but not voice), impeding communication by people who rely on text as their only form of communication.

Within the IP environment, there needs to be a common protocol for text that can allow for the integration of voice and text through a variety of different communication media. This goal can be met by using gateways and transcoding methods, but these have not been applied in the VoIP industry; indeed, there is little coordination among the many standards-setting activities directed at these problems. *An FCC rule for text to have equal priority with voice in emerging networks and services in getting through to their destinations is needed to permit the successful migration from TTYs to IP text communication. An FCC rule requiring that text conversation be interoperable and reliable across all call segments is also needed to prevent each industry segment or company from implementing a different or unreliable technology, thus preventing any reliable call from end to end that would involve their equipment or systems.* Unless a clear path forward is determined through an FCC rule, interoperability and international harmonization on this issue will not occur.

There is ample legal support for the issuance of a mandate that updates technology to ensure direct access by deaf and hard of hearing people to 9-1-1. ADA Title II mandates that people with disabilities not be "excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity."[6] Although the House of Representatives explained that this requires direct access to local 9-1-1 emergency centers by TTY users, it left open the door for direct access to be achieved in other ways:

[6] 42 USC §12132.

> As part of its prohibition against discrimination in local and state programs and services, Title II will require local governments to ensure that these telephone emergency number systems are equipped with technology that will give hearing impaired and speech impaired individuals a direct line to these emergency services. While initially this will mean installation of a TDD or compatible ASCII or Baudot computer modems by programs operating these services, *future technological advances* – such as speech to text services – *may offer other means of affording direct and equally effective access for these individuals.*"[7] [emphasis added]

It is clear from this language that direct TTY access to emergency call centers was not the only form of direct access to 9-1-1 emergency services that could fulfill the ADA's emergency access mandate. The ADA Conference Report echoed this sentiment:

> "Questions have been raised regarding the obligations under this legislation of local and state governments to make 9-1-1 telephone emergency services available to hearing impaired and speech impaired persons. It is the intent of the conferees that the telephone emergency services operated by local and state governments be accessible to such individuals. This means that such telephone emergency systems *must be equipped with technology that gives these individuals direct access to emergency services.* For the present, this would require that local emergency systems provide a direct telephone line for individuals who rely on telecommunications devices for the deaf (the Baudot format) and computer modems (the ASCII format) to make telephone calls. *In the future, new technology,* such as speech-to-text services, *may require other forms of direct access for such individuals.* With this title II mandate, individuals with hearing and speech impairments will finally join the rest of us in having immediate access to assistance from police, fire, and ambulance services."[8] [emphasis added]

Even the U.S. Department of Justice (DOJ), in promulgating rules to implement the requirement for direct access to 9-1-1 shied away from specifying a particular technology for local PSAPs. DOJ explained that its rule gave entities "the flexibility to determine what is the appropriate technology for their particular needs." In order "to avoid mandating use of particular technologies that might become outdated," the Department further declined to include references to either the Baudot or ASCII formats

[7] H. Rep. No. 485, Part 2, 101st Cong., 2d Sess. (May 15, 1990) at 84-85 (emphasis added).
[8] Conf. Rep. No. 596, 101st Cong., 2d Sess. (July 12, 1990) at 67-68 (emphasis added).

in its final Title II rules.[9] Requiring that the various industries involved in end to end VoIP choose or create an interoperable and reliable mechanism for IPtext transmission end to end (without the FCC specifying what that would be) to achieve reliable and interoperable direct access to PSAPs over IP-based technologies, then, would be well within the 9-1-1 access envisioned by the ADA Congress, as well as consistent with the FCC's obligations to require accessible products and services under Section 255.

IV. Market Forces Will not Safeguard Disability Interests

It is an unfortunate fact that historically, competitive market forces have not been sufficient to safeguard the interests of people with disabilities. People with disabilities have benefited greatly from mass market technologies, such as email, that are inherently accessible. However, mass market technologies that are not accessible will not be made accessible by companies without regulation, due to the relatively small size of each niche of disabled consumers. Although is has been argued that "rising waters float all boats", or that industry will make the changes voluntarily, neither has proved to be the case. The introduction of lighter telephone receivers that no longer provided hearing aid compatibility in the 1970s, the increased use of graphical computer interfaces that were inaccessible to screen readers used by people with vision disabilities in the 1980s, and the explosive growth in digital wireless telephone services that were incompatible with TTYs and hearing aids in the late 1990s all threatened to remove access for people with disabilities (while at the same time offering significant benefits to the general public).

[9] 28 C.F.R. §35.162.

This failure of the telecommunications marketplace has prompted Congress, on numerous occasions, to pass remedial legislation to require disability access. The Telecommunications for the Disabled Act of 1982,[10] the Hearing Aid Compatibility Act,[11] Title IV of the Americans with Disabilities Act,[12] the Telecommunications Accessibility Enhancement Act,[13] Section 255 of the Communications Act,[14] and Section 508 of the Rehabilitation Act[15] are all mandates designed to provide people with disabilities telecommunications tools to lead independent and productive lives.

On various occasions, the Commission, too, has acknowledged these competitive shortcomings.[16] In its Second Report on high speed Internet access, the Commission identified persons with disabilities as a category of Americans "who are particularly vulnerable to not having access to advanced services."[17] Similarly, in its Third Report assessing the deployment of high speed services, the Commission acknowledged that the lack of accessible equipment, content and software were causing "significant impediments" to broadband services for individuals with disabilities.[18] And in November of 2000, when the Commission revised its Part 68 rules to eliminate its technical criteria and oversight of customer premises equipment connected to the public switched telephone network, it retained those sections of Part 68 that pertain to disability access."[19]

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[10] P.L. 97-410, codified as 47 U.S.C. §610 (moved to §710).
[11] P.L. No. 100-394, codified at 47 U.S.C. §610 (moved to §710).
[12] P.L. No. 101-336, codified at 47 U.S.C. §225.
[13] P.L. No. 100-542, codified at 40 U.S.C. §762..
[14] P.L. No. 104-104, codified at 47 U.S.C. §255.
[15] P.L. 105-220, Title IV, §508(b), codified at 29 U.S.C. §794(d),
[16] *Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion*, Second Report, CC Dkt. No. 98-146, 15 FCC Rcd 20913 (2000) at ¶234.
[17] *Id.*
[18] *Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion*, CC Dkt. No. 98-146, Third Report, FCC 02-33 (2002) at ¶103.
[19] *In the Matter of 2000 Biennial Regulatory Review of Part 68 of the Commission's Rules and Regulations*, Report and Order, CC Docket No. 99-216, FCC 00-400 (Nov. 9, 2000) at ¶66.

Mandates for universal access to IP-based services and equipment are needed to make sure that people with disabilities can secure emergency access from the home, their workplaces, hotels, and other locations to which individuals might travel. In these latter situations, individuals do not have the ability to select among devices, but rather must be able to operate the only those phones that are available.

V. The Commission Has Authority to Ensure that People with Disabilities Can Access Emergency Services Through IP-Enabled Technologies

The Commission seeks comment on the basis for imposing accessibility obligations on IP-enabled services. The FCC has ample jurisdiction to extend these obligations under its authority to mandate functionally equivalent relay services under Section 225, to ensure universal service under Section 1, and to ensure access by people with disabilities under section 255.

1. Section 225

The Commission has already extended its authority under Section 225's mandates for TRS to reach IP-enabled services. Specifically, the Commission used a functional definition of "telecommunications relay services" to authorize the provision of Internet-based relay services in April, 2002. In deciding to authorize IP relay, the Commission chose not to look at the form of these communications, but rather concluded that these services could include "all transmission using telephonic equipment or devices, whether over the public network, cable, satellite, or any other means, so long as the requisite functionality is provided."[20] The Commission then defined the requisite functionality as two way communication between people with hearing or speech disabilities and people without those disabilities. By considering the functionality, rather than the form of the

[20] IP Relay Ruling at ¶11.

transmission method, the Commission facilitated the provision of a service that now fulfills the underlying purpose of the ADA to expand telecommunications access, as well as the Commission's goal of expanding the use of broadband technologies. The FCC's IP relay ruling is consistent with the intent of Congress – as evidenced by two decades of federal legislation requiring telecommunications access – to take policy actions that ensure that individuals with disabilities have an equal opportunity to benefit from advanced and innovative methods of achieving communications. We suggest that where IP-enabled services are used to provide emergency and non-emergency communications that are functionally similar to those achieved via traditional telephony services, the accessibility of those services, as well as the products that are used with them, should similarly be subject to mandates for accessibility.

2. Universal Service

The universal service obligation mandates the Commission to "make available, so far as possible to all the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges . . . "[21] It is this obligation upon which Congress has consistently relied (in the many Acts cited above), and under which the Commission has consistently exercised its statutory duty, to ensure that individuals with disabilities are included in the benefits of modern telecommunications.

For example, in deciding to pass the 1982 Telecommunications for the Disabled Act, Congress concluded that if people with disabilities were unable to afford the purchase of specialized customer premises equipment, they would lose access to telephone services, and that this "would disserve the statutory goal of universal service

[21] 47 U.S.C. §151.

[and] deprive many individuals of the opportunity to have gainful employment."[22] Six years later, Congress again relied on the universal service mandate to expand hearing aid compatibility obligations in the Hearing Aid Compatibility Act. The House Committee explained: "Our nation's public policy goal is equal, universal telephone service for all Americans. This legislation endeavors to ensure that all hearing impaired persons will have complete access to the telephone network."[23] It concluded,

> [u]niversal compatibility and equal access by the hearing impaired to the telephone network follow from the [universal service provision of the] Communications Act of 1934. . . Advances in technology have made communication possible and it is time that hearing impaired persons are include in 'all the people'"[24]

Congress's requirements for federal relay services, as required by the Telecommunications Accessibility Enhancement Act and Title IV of ADA, also rested on its commitment to fulfill the universal service obligation. In fact, the language of Title IV itself incorporates the universal service mandate:

> *In order to carry out the purposes established under section 1, to make available to all individuals in the United States a rapid, efficient nationwide communication service*, and to increase the utility of the telephone systems of the Nation, the Commission shall ensure that interstate, and intrastate telecommunications relay services are available, to the extent possible . . ."[25]

That the Commission has both the authority and the obligation to utilize the universal service mandate to ensure disability access to IP-enabled services and equipment is firmly established by the above laws and their legislative histories. As our nation moves to more advanced services, the failure to ensure access by people with

[22] H. Rep. No. 888, 97th Congress, 2d Sess (1982) at 3-4.
[23] H. Rep. No.674, 100th Cong., 2d Sess (1988) at 3.
[24] *Id.* at 6.

[25] 47 U.S.C. §225((b)(1) (emphasis added).

disabilities could have the unintended consequence of leaving these communities behind, eliminating the independence, integrity, and other gains achieved by the above statutes. We urge that as the Commission moves forward in setting policies for ensuring emergency access via IP-enabled services, it uphold the past two decades of Congressional efforts to ensure full access for all Americans with disabilities.

3. Section 255

The final legal basis for ensuring disability access in an IP-enabled environment turns on use of the Commission's ancillary jurisdiction under Section 255. The Commission is permitted to exercise this jurisdiction where it has subject matter jurisdiction over a particular type of communications and jurisdiction is required to fulfill a statutory obligation.

The Commission has long accepted the principle that mandating telecommunications accessibility falls within the execution of its statutorily prescribed functions. The string of accessibility statutes listed above attests to Congress's interest in having the Commission once again play an active and vital role in ensuring disability access to emergency and non-emergency services through IP-enabled communication technologies.

This would not be the first time that the FCC used its ancillary jurisdiction to ensure disability access. In its Section 255 proceeding, the Commission exercised ancillary jurisdiction to reach two information services - interactive voice response systems and voice mail. The Commission concluded that these services were so essential to the ability of persons with disabilities to effectively communicate, that the failure to require their accessibility would undermine Congress's interest in ensuring

telecommunications access.[26] Similarly, here, a failure to ensure that people with disabilities using VoIP technologies have access to 911 authorities would effectively undermine the Commission's goal to uphold our nation's policies to safeguard the accessibility interests of people with disabilities.

IX. Conclusion

The FCC has explained that its new E911 order is designed "to ensure that the increasingly widespread deployment of a new communications technology does not damage the ability of states and localities to provide reliable and high-quality 9-1-1 service to all citizens."[27] As our society migrates from traditional telephone services to Internet-enabled platforms, consumers with disabilities, including many older Americans, similarly should not find that the protections that were available to them under the more traditional platforms disappear just because these newer technologies also have other, more versatile uses. As the agency tasked with ensuring that our nation's telecommunications policies serve the public interest, the FCC has both the authority and the responsibility to ensure that these new and innovative technologies maximize communication by people with disabilities. It must do so by adopting specific mandates that mirror those now applied under Section 255, to ensure that companies incorporate access into these Internet-based services as they are designed and developed.

We applaud the Commission for acknowledging the need to apply regulatory measures to ensure access by people with disabilities as our nation's communications

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[26] *In the Matter of Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as enacted by the Telecommunications Act of 1996, Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities*, Report and Order and Further Notice of Inquiry at ¶46, WT Dkt No. 96-198, FCC 99-181 (rel. Sept 29, 1999).
[27] VoIP E9-1-1 Order at ¶10.

migrate to IP-enabled services, and stand willing to work closely with the Commission in achieving this objective.

Respectfully Submitted,

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